CORNELL-DUBILIER ELECTRONICS SITE

REMOVAL ACTION REPORT

PREPARED FOR

US ENVIRONMENTAL PROTECTION AGENCY
REGION II – REMOVAL ACTION BRANCH
EDISON, NEW JERSEY 08837

DCN #: RST 2-02-F-1372
TDD #: TO-0017-0043

EPA CONTRACT #: EP-W-06-072

NOVEMBER 2010

PREPARED BY

REGION II REMOVAL SUPPORT 2
WESTON SOLUTIONS, INC.
NORTHEAST DIVISION
EDISON, NEW JERSEY 08837

REMOVAL ACTION REPORT

CORNELL-DUBILIER ELECTRONICS SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Prepared for

U.S. Environmental Protection Agency
Region II – Removal Action Branch
Edison, New Jersey 08837

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EPA Contract No: EP-W-06-072

September 2010

Prepared by

Region II Removal Support Team 2,
Weston Solutions, Inc.
Northeast Division
Edison, New Jersey 08837

Approved by:

RST 2

Sean Hettinger – Site Project Manager Date: 10/29/10

RST 2

Timothy Benton – Group Leader Date: 10/29/10

EPA

Gezahegne Bushra – On-Scene Coordinator Date: 11/1/10

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LIST OF ATTACHMENTS

EXECUTIVE SUMMARY

The Cornell-Dubilier Electronics Site (CDE) is the location of a former manufacturer of electronic parts and components, including capacitors. Cornell-Dubilier Electronics, Inc., also tested transformer oils. During its operations, the company allegedly dumped Polychlorinated Biphenyl (PCB)-contaminated materials and other hazardous substances directly onto the soil at the Site. The Site is approximately 25 acres in size, including an open field and adjoining wetland complex. The Bound Brook traverses the southeast corner of the Site.

The United States Environmental Protection Agency (EPA) has been collecting soil and interior dust samples from residential properties nearby the CDE facility to test for contamination with PCBs. Properties that were found to have PCBs above the Operational Unit #1 (OU-1) Record of Decision (ROD) criterion for total PCBs were remediated by removing contaminated yard soil and/or interior dust. .

During this operation period, EPA cleaned interior structures of six properties near the CDE facility that were contaminated with total PCBs in dust above the ROD criterion of 1.0 ppm.

This Removal Action Report (RAR) contains information pertaining to cleanup operation conducted by EPA at those six properties between June 14, 2010 and July 1, 2010.

1.0 INTRODUCTION

The Record of Decision (ROD) for Operational Unit #1 (OU-1)- issued on September 30, 2003 for the CDE Site addresses residential and commercial properties in the vicinity of the site. Soil and interior dust samples were collected from residential properties that are located near the CDE facility for PCBs analysis. This RAR documents the decontamination of interior structures and furniture of six residences that exhibited levels of PCBs at or above the ROD criterion for total PCBs of 1.0 ppm.

2.0 SITE DESCRIPTION

Cornell-Dubilier Electronics is located in South Plainfield, New Jersey (See Figure 1 in Attachment 1). CDE operated at the Site from 1936 to 1962 manufacturing electronic parts and components, including capacitors. During its operation, the company dumped material contaminated with PCBs and other hazardous substances directly onto site soils. On April 2, 1997, the site was referred to EPA for the Removal Action consideration by the New Jersey Department of Environmental Protection (NJDEP). The site was added to the National Priorities List in 1998. Since then, EPA has been addressing the site using both short and long term cleanup actions. Interior cleaning of PCB-contaminated dust from adjacent homes is part of short-term cleanup actions (See Figure 2 in Attachment 1). Indoor air dust samples collected from carpeted and non-carpeted floor of residential properties located near the site were found to contain PCBs at concentrations up to 205 parts per million (ppm). EPA suspects that PCB-contaminated dust from the facility property migrated off-site via wind currents and was deposited into adjacent homes and on residential properties at levels of health concern and EPA has initiated clean-up activities. The table below shows property IDs and their respective pre-cleaning total PCBs level above the ROD criterion in interior dust samples collected from the six properties scheduled to be cleaned at this operation period.

Property ID	Total PCBs (ppm)
110	1.91
111	3.50
112	1.15
116	47
121	1.14
123	3.90

3.0 PROJECT DESCRIPTION

EPA's interior dust cleanup activities involve the washing of interior heating and cooling ducts, shampoo cleaning of carpets, washing of linoleum and tile floor surfaces and all shelves and table tops. Mopping and wiping processes included cleaning solutions of Lestoil® cleaner or Mr. Clean® product and water. During this removal operation period, accesses from properties with identification numbers (IDs) 110, 111, 112, 116, 121 and 123 were obtained to proceed with interior dust cleanup. Residents of each property were provided, by EPA the opportunity to temporarily be relocated nearby while

cleanup operation in each of their residence was in progress. The Region 2 Removal Support Team (RST 2) contractor documented pre- and post-interior dust cleaning operations at the six properties by EPA's Emergency and Rapid Response Services (ERRS) contractor. (See Photographic Documentation in Attachment 2).

4.0 WASTE MANAGEMENT

All waste-waters generated from the cleaning operations were collected in 55 gallon drums.

Approximately 600 gallons of waste-water were generated from all properties. Composite sample from waste-water generated from each property was collected for PCBs analysis. PCBs were not detected in all samples collected and all drums of non-hazardous waste-water generated were disposed of at the CDE waste-water treatment facility.

Approximately three yards of dust and debris including used Personal Protective Equipment (PPE) were generated during cleanup operation. Dust and used PPE were also sampled for PCBs analysis and deemed non-hazardous prior to disposal to be treated on-site by low temperature thermal desorption. The table below indicates how many drums of waste-water were generated from cleaning operations at each property.

Property ID	# of Drums of Waste-Water Collected
110	1
111	3
112	2
116	2
121	2
123	1

5.0 PROJECT ORGANIZATION, COST, AND SCEHDULE

RST 2 and ERRS contractors provided personnel and equipment to support the U.S. EPA complete the task .

5.0.1 ERRS Activity

The ERRS personnel were responsible for the cleaning of residents homes. Personnel ensured all surfaces were vacuumed and/or wiped with a solution of Lestoil® or Mr. Clean® and water.

5.0.2 RST Activity

The RST 2 Project Manager was responsible for ensuring that all site personnel abided by all requirements of the site-specific Health and Safety Plan (HASP). The RST 2 Project Manager or designee was involved in the review and adoption of the HASP, documenting and reporting all pre- and post-cleanup operations.

5.0.3 Cost

	Budgeted	Cost to Date
ERRS Contractor	**$250,000.00**	**$56,028.59**
RST	**$0.00**	**$13,717.42**
Project Ceiling	**$250,000.00**	
Percent of Project Funds Remaining		**78%**

5.0.4 Schedule

Property ID	Address	Cleaning Dates
110	**124 Delmore Avenue**	**6/15/10 - 6/16/10**
123	**127 Arlington Avenue**	**6/17/10 - 6/18/10**
121	**104 Arlington Avenue**	**6/21/10 - 6/22/10**
111	**132 Delmore Avenue**	**6/23/10 - 6/24/10**
116	**220 Delmore Avenue**	**6/28/10 - 6/29/10**
112	**136 Delmore Avenue**	**6/30/10 - 7/1/10**

6.0 SITE HEALTH AND SAFETY PROGRAM

6.0.1 ERRS Site Health and Safety Coordinators

The ERRS Site Health and Safety Coordinators (SHSCs) were responsible for ensuring that all requirement of the HASP were adhered to by RST 2 and ERRS personnel and subcontractors.

6.0.2 ERRS Response Manager (RM)

The ERRS Response Manager was directly responsible for ensuring the preparation and daily implementation of the CDE site-specific HASP for all ERRS personnel. The RM initiated and maintained communication with the ERRS HSO concerning site-specific health and safety issues and project status. In case of emergency, the RM took immediate action to

correct any deficiencies in safety operations reported to him by Site personnel.

6.0.3 ERRS/RST 2 Staff

Every ERRS and RST 2 employee was responsible for adhering to all provisions of the Health and Safety Program and individual HASPs. In addition, employees were expected to exercise appropriate caution with respect to their individual safety and be concerned with the safety of fellow team members. All RST 2 and ERRS employees had the responsibility of identifying and being aware of workplace hazards, evaluating the hazards, and implementing appropriate measures to protect themselves against those hazards.

6.0.4 Health and Safety Plans

ERRS generated and submitted a final site-specific HASP on June 14th, 2010 that provided the majority of the safety guidelines for on-site work (See Attachment 3). The HASP was signed by EPA and RST 2.

6.0.5 Personal Protective Equipment (PPE)

Modified Level D PPE was utilized by ERRS and RST 2 during the cleanup activities and consisted of the following:

- Steel toe boots
- Latex Boot Covers
- Hard Hat
- Work gloves or chemical resistant Nitrile® gloves
- Coveralls (Chemical/Particulate Resistant)

6.0.6 Project / Health & Safety Training Requirements

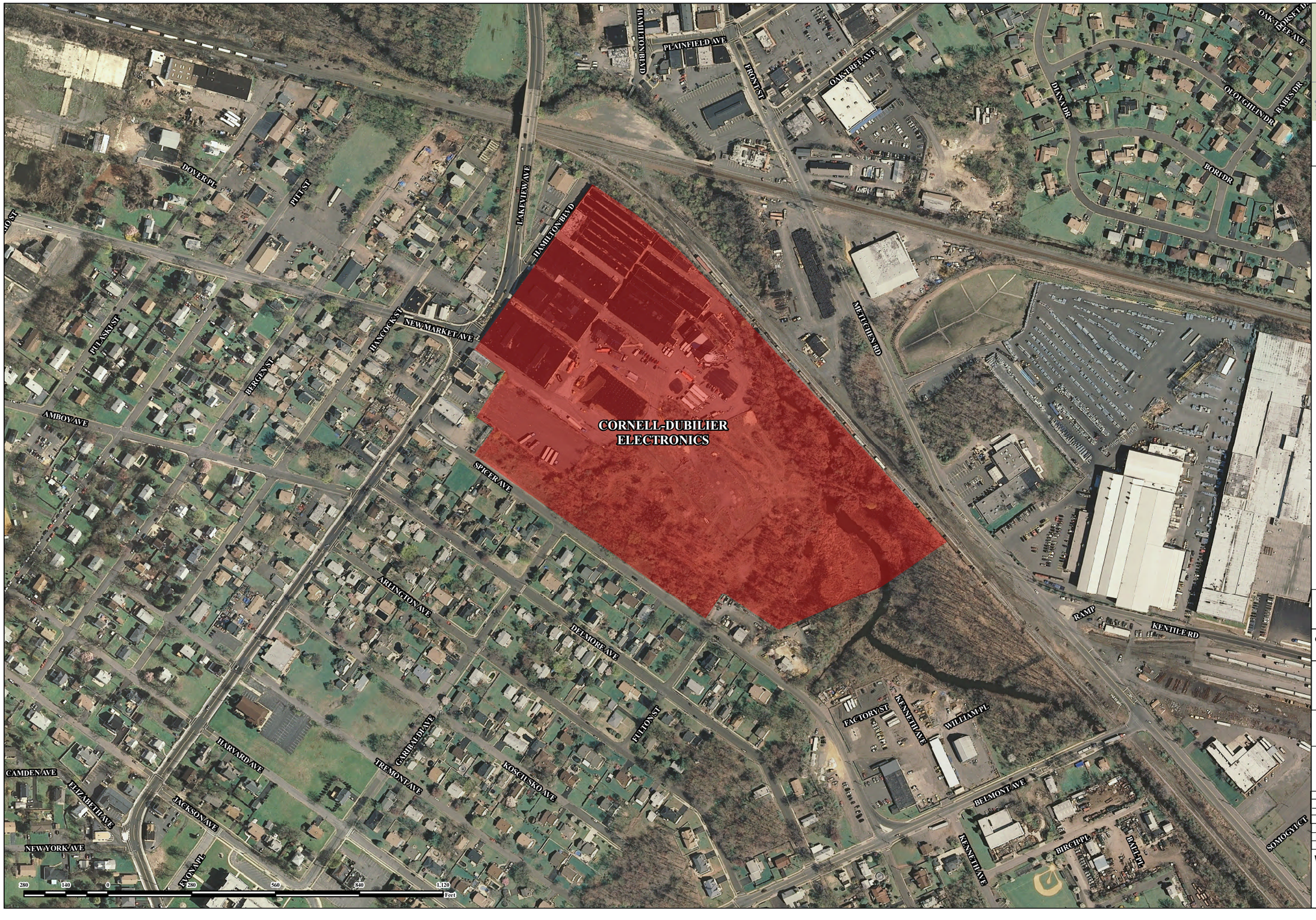
All on-site personnel have completed an approved 40-hour OSHA HAZWOPER Training course and were current with an approved 8-hour OSHA HAZWOPER Refresher Training course.

6.0.7 Home Security and Temporary Relocation for Residences

Families at properties 110, 116, 121 and 123, required temporary relocation and stayed either with relatives or at EPA arranged accommodations. Residents who were temporarily relocated were reimbursed for meal and incidental expenses (M&IE) otherwise known as Per Diem.. Overnight security services were also provided to safeguard residents' property and belongings while they were temporarily away from their residences.

ATTACHMENT 1

SITE FIGURES



SCALE

1:3,654

LEGEND

Site Location

Figure 1: Site Map

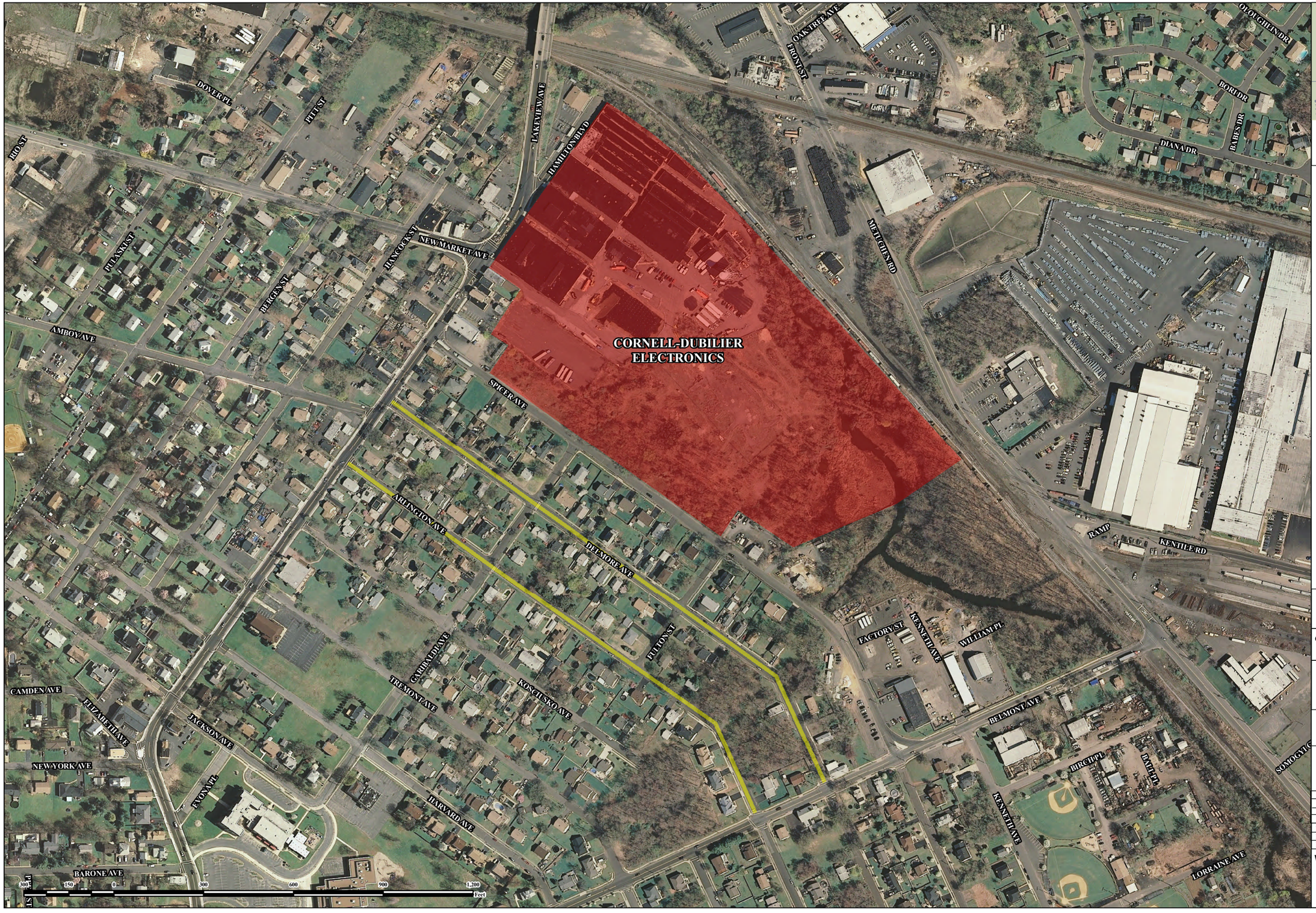
CORNELL-DUBILIER ELECTRONICS
SOUTH PLAINFIELD, NEW JERSEY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 2
CONTRACT # EP-W-06-072

Weston Solutions, Inc.
Northeast Division

In Association With
Scientific and Environmental Associates, Inc.,
Innovative Technical Solutions, Inc. &
Avatar Environmental, LLC

GIS ANALYST:	F. CAMPBELL
EPA OSC:	G. BUSHRA
RST 2 SPM:	S. HETTINGER
FILENAME:	OV SITE MAP.MXD
FIGURE	1
REVISION	0
DATE MODIFIED	07/21/2010



SCALE

1:3,654

LEGEND

Cleaning Area Location

Site Location

Figure 2:
Cleaning Area Location

CORNELL-DUBILIER ELECTRONICS
SOUTH PLAINFIELD, NEW JERSEY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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GIS ANALYST:	F. CAMPBELL
EPA OSC:	G. BUSHRA
RST 2 SPM:	S. HETTINGER
FILENAME:	OV SITE MAP.MXD
FIGURE	2
REVISION	0
DATE MODIFIED	07/21/2010

ATTACHMENT 2

PHOTOGRAPHIC DOCUMENTATION

Picture 1: Hallway of Property ID 121 after cleaning.

Picture 2: Living Room of Property ID 121 after cleaning.

Picture 3: Basement of Property ID 123 before cleaning.

Picture 4: Basement of Property ID 123 after cleaning.

Picture 5: Living room of Property ID 111 after cleaning.

Picture 6: Basement of Property ID 111 after cleaning.

Picture 7: Basement of Property ID 112 before cleaning.

Picture 8: Basement of Property ID 112 after cleaning.

Picture 9: Basement of Property ID 116 before cleaning.

Picture 10: Basement of Property ID 116 after cleaning .

Picture 11: One of the HEPA vacuum cleaners utilized at the Site.

Picture 12: ERRS crew vacuuming dust behind appliance at Property ID 110.

Picture 13: ERRS crew vacuuming dust underneath radiator at Property ID 110.

Picture 14: ERRS crew wiping dust from basement floor at Property ID 110.

Picture 15: ERRS crew vacuuming dust from window blind at Property ID 110.

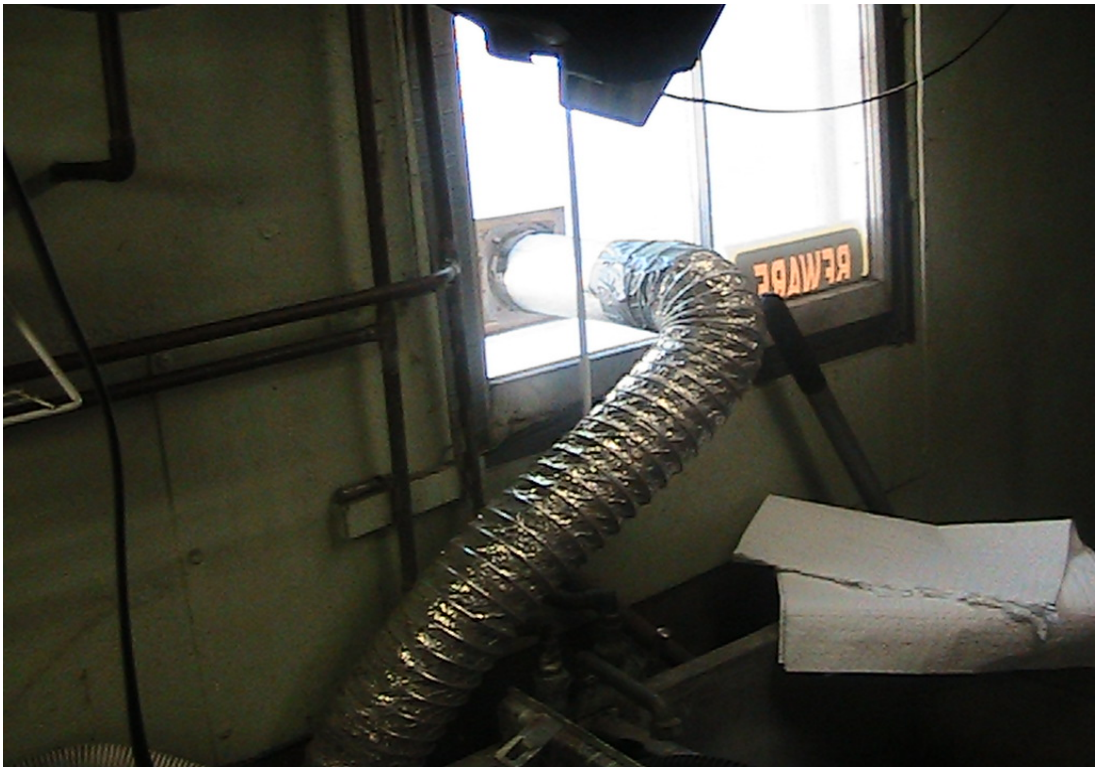
Picture 16: ERRS crew vacuuming dust under basement sink at Property ID 110.

Picture 17: ERRS crew vacuuming dust in the basement at Property ID 110.

Picture 18: ERRS crew wiping basement concrete floor at Property ID 110.

Picture 19: ERRS crew vacuuming basement concrete floor at Property ID 110.

Picture 20: ERRS crew vacuuming basement window frame at Property ID 110.



Picture 21: Clean flexible dryer air exhaust at Property ID 110.

Picture 22: ERRS crew steam cleaning the carpet at Property ID 110.

Picture 23: ERRS crew vacuuming rug at Property ID 110.

Picture 24: ERRS crew wiping dust from window blind at Property ID 110.

Picture 25: ERRS crew vacuuming top of the door frame at Property ID 110.

Picture 26: Dust behind appliance prior to cleaning at Property ID 110.

ATTACHMENT 3

ERRS HEALTH AND SAFETY PLAN

SITE HEALTH AND SAFETY PLAN

EMERGENCY AND RAPID RESPONSE SERVICES

CORNELL-DUBILIER ELECTRONICS SITE
SOUTH PLAINFIELD, NJ

PREPARED FOR

U.S. Environmental Protection Agency - Region 2
2890 Woodbridge Avenue
Edison, NJ 08837

Contract No.: EP-S2-10-03
Task Order: 001
Project No: CD2-01

JUNE 7, 2010

Environmental Restoration LLC
1666 Fabick Drive
Fenton, MO 63026
www.erllc.com

FINAL
SITE HEALTH AND SAFETY PLAN

EMERGENCY AND RAPID RESPONSE SERVICES

CORNELL-DUBILIER ELECTRONICS SITE
SOUTH PLAINFIELD, NJ

JUNE 7, 2010

I hereby certify that the enclosed Site Health and Safety Plan, shown and marked in this submittal, has been prepared in accordance with OSHA 29 CFR 1910 and is proposed to be incorporated with Contract No.: EP-S2-10-03 Task Order 001. This Site Health and Safety Plan is submitted for Government approval.

Plan Preparer:

Mark Bicksler Response Manager	6/7/10 Date	314-614-6577 Phone Number

Plan Approval:

Lonnie R. Wright Vice President, Health and Safety	Date	636-680-2422 Phone Number

Accepted as a submittal:

Gezahegne Bushra On Scene Coordinator USEPA Region 2	08/07/10 Date	732-321-6646 Phone Number

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MANDATORY ATTACHMENTS

GLOSSARY OF ACRONYMS

AHA	Activity Hazard Analysis
ANSI	American National Standards Institute
COC	contaminant of concern
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
CSP	Certified Safety Professional
dBA	decibel A-weighted
DEET	N, N-diethyl-m-toluamide
EMR	experience modification rate
EMT	emergency medical technician
ERRS	Emergency and Rapid Response Services
USEPA	United States Environmental Protection Agency
EZ	Exclusion Zone
HAZWOPER	Hazardous Waste Operation and Emergency Response
HIPO	high loss potential
HMIS	Hazardous Materials Identification System
HTRW	hazardous, toxic and radioactive waste
IDLH	immediately dangerous to life and health
kV	kilovolt
MCL	Maximum Contaminant Level
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
MSDS	Material Safety Data Sheet
NFPA	National Fire Prevention Association
NIOSH	National Institute of Occupational, Safety and Health
NPL	National Priority List
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
PM	Project Manager
POL	petroleum, oils, and lubricants
PPE	personal protective equipment
RIR	recordable incident rate
SCBA	self-contained breathing apparatus
SOP	Standard Operating Procedure
SOW	Scope of Work
START	Superfund Technical Assistance and Response Team
HASP	Site Health and Safety Plan
SHSO	Site Health and Safety Officer
WNV	West Nile Virus

1.0 INTRODUCTION AND SITE ENTRY REQUIREMENTS

This document describes the health and safety guidelines developed for the Cornell-Dubilier Electronics (CDE) Site, to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes. The procedures and guidelines contained herein were based upon the best available information at the time of the plan's preparation. Specific requirements will be revised when new information is received or conditions change. A written amendment will document all changes made to the plan. Any amendments to this plan will be included in Attachment A. Where appropriate, specific OSHA standards or other guidance will be cited and applied.

All work practices and procedures implemented on site must be designated to minimize worker contact with hazardous materials and to reduce the possibility of physical injury. All work will be performed in accordance with applicable Federal 29CFR 1910 and 1926 Health and Safety Regulations and the Federal 29CFR 1910.120 Hazardous Waste Site Safety Regulations.

1.1 Daily Safety Meetings

Daily safety meetings will be held at the start of each shift to ensure that all personnel understand site conditions and operating procedures, to ensure that personal protective equipment is being used correctly and to address worker health and safety concerns.

1.2 Site Specific Training

The Response Manager shall be responsible for informing all individuals entering the exclusion zone or decontamination zone of the contents of this plan and ensuring that each person signs the Site Specific Training Record in Attachment Z. By signing the Site Specific Training Record, individuals are recognizing the potential hazards present on-site and the policies and procedures required minimizing exposure or adverse effects of these hazards.

1.3 Key Personnel

Project/Task Order: CD2-01 – Cornell-Dubilier Electronics Site	
Key Personnel	
Names and Titles	**Contact Information**
Gezahegne Bushra – USEPA Region 2, OSC	732-321-6646 (Office) Email: bushra.gezahegne@epa.gov
Mark Bicksler - Response Manager	314-614-6577 (Mobile) Email: m.bicksler@erllc.com
Mark Bicksler – Site Health and Safety Officer	314-614-6577 (Mobile) Email: m.bicksler@erllc.com
Lonnie R. Wright – Project HS Manager	636-680-2422 (Office) 636-262-0862 (Mobile) Email: l.wright@erllc.com
Subcontractors	
Company	**Scope of Services**
TBD	TBD

2.0 ROLES AND RESPONSIBILITIES

2.1 Response Manager (RM): Mark Bicksler

The Response Manager, as the field representative for ER and its subcontractors, has the responsibility for fulfilling the terms of the contract. The RM must oversee the project and ensure that all technical, regulatory and safety requirements are met. The Response Manager is the on site Health and Safety Officer (HSO) when the HSO is not on site. The Response Manager is responsible for the duties listed in Section 2.2.

2.2 Site Health and Safety Officer (HSO): Mark Bicksler

The ER Site Safety Officer will be assigned to the site on a full-time basis with functional responsibility for implementing the Site Health and Safety Plan as ER applies to ER personnel.

Specific Duties Include:

a. Assist RM in providing a safe and healthful work environment.
b. Supervise confined space entries.
c. Assist RM in reporting and investigating all incidents.
d. Ensure proper decontamination of personnel and equipment is accomplished.
e. Ensure that air monitoring equipment is calibrated and operational.
f. Conduct personal air monitoring as required.
g. Perform respirator fit tests, as necessary.
h. Inventory and inspect PPE prior to personnel entries into exclusion zone.
i. Prepare summary letter of personal air sampling results.
j. Ensure proper personal protective equipment is being utilized.
k. Assist RM in obtaining required personnel training and medical records.
l. Inspect first aid kits and fire extinguishers.

2.3 Other:

Any persons who observe safety problems should immediately report observations/concerns to appropriate key personnel listed in Section 2.1 or 2.2 above.

SUBCONTRACTORS

COMPANY NAME	TBD		
CONTACT NAME			
PHONE			
ADDRESS			
SCOPE OF WORK			
TRAINING REQUIRED? ***(CHECK ONE)***	☐YES	❑NO	DESCRIBE:
CONTRACTOR PREQUALIFIED?	☐YES	❑NO	

3.0 SITE BACKGROUND AND SCOPE OF WORK

3.1 Site Background

CDE operated the site from 1936 to 1962 manufacturing electronic parts and components, including capacitors. During tits operation, the company dumped material contaminated with PCBs and other hazardous substances directly onto site soils. On April2, 1997, the site was referred to EPA for the Removal Action consideration by the New Jersey Department of Environmental Protection. The site was added to the NPL in 1998. Since then, EPA has been addressing the site using both short and long term cleanup actions. Interior cleaning of PCB contaminated dust from adjacent homes is part of the short-term cleanup actions. Indoor air dust samples collected from carpeted and non-carpeted floor of residential properties located near the site were found to contain PCBs at concentrations up to 205 ppm. EPA suspects that PCB contaminated dust from the facility property migrated off-site via wind currents and was deposited into adjacent homes and on residential properties at levels of health concern and EPA has initiated clean-up activities.

EPA's cleanup activities involve the washing of interior heating and cooling ducts, shampooing of carpets, washing of linoleum and tile floor surfaces and all shelves and table tops. Cleaning solutions used during the mopping and wiping process are comprised of Lestoil or Mr. Clean and water.

3.2 Scope of Work for ER

1) Mobilize necessary personnel and equipment
2) Clean homes by mopping, vacuuming, wiping, washing, etc.
3) Transport and dispose of contaminated wash solutions
4) Demobilize personnel and equipment

4.0 HAZARD ASSESSMENT

This section is to be addressed in the daily tool box safety meeting as each task is to be initiated. Each Task-Specific Safety Assessment is designed to develop awareness to chemical and physical hazards specific to each task. It would be impractical to repeat in complete detail each control measure and SOP for each job task. Sources, Hazards and Control Measures will be addressed for each job task.

Specific work tasks with unique hazards and/or PPE requirements must be evaluated or reevaluated prior to beginning work. This task review will be led by the Project Health and Safety Manager and the SHSO, and will include knowledgeable individuals such as the worker(s) and the supervisor. PPE requirements, based on this assessment, will be included in Section 6 of the HASP or in the AHA for the specific task. All workers must be trained in the requirements of the HASP and the applicable AHAs prior to beginning work. The required PPE may be changed by the SHSO, based on the results of additional air monitoring, or on task-specific needs. Downgrades will require the approval of the Project Health and Safety Manager unless otherwise permissible by the HASP.

The following section outlines the AHAs, Referenced Standard Operations Procedures (SOPs) and Chemical Hazards associated with this project. Applicable SOPs are available from ER's Health and Safety Database. AHAs will be developed for each of the SOW activities listed in Section 3.2 and submitted prior to the start of field work.

The AHAs should be revised for site-specific activities and review with the work crew before commencing any activity.

The following table lists ER health and safety SOPs that are applicable to this project.

Referenced SOPs:	
ER SOPs applicable to this project or task order:	
HS-1 Air Monitoring and Sampling HS-2 Blood Borne Pathogens Exposure Control Plan HS-8 Decontamination Measures HS-10 Driver and Vehicle Controls	HS-15 Hazard Communication HS-16 Hearing Conservation HS-24 Personal Protective Equipment HS-26 Respiratory Protection
UXO known or suspected to present?	UXO support and plans provided

Referenced SOPs:			
ER SOPs applicable to this project or task order:			
Yes ❑	No ☑	Yes ❑	No ☑
Lifts Yes ❑	No ☑		
Items to be lifted: N/A		Critical ❑	Ordinary ❑
Excavations Yes ❑	No ☑		

4.1 Chemical Hazards

Site Contaminants/Chemicals of Concern					
Chemical	**Media**	**PEL**	**TLV**	**Route of Entry**	**Symptoms Acute/Chronic**
Polychlorinated Biphenyls (PCBs)	Dust/Dirt	.5mg/m^3 Skin	.5mg/m^3 Skin	Inhalation Ingestion Contact	Liver damage Eye/Skin Irritation

See Attachment C for Chemical Hazard Information, MSDS'

4.2 Task Specific Hazards and Controls

Task Specific Safety Assessment		
Job Task: Interior Cleaning/Removal Operations		
Personal Protective Equipment: Modified Level D w/air monitoring justification		
Hazard	**Sources**	**Control Measures**
PCB Exposure	Contaminated surfaces/carpet	- Avoid contact - Control work area to authorized personnel only - Utilize proper PPE per section 6.3 of this HASP to include Breathable disposable coveralls (Lakeland C8414 or equivalent) - Air purifying respirator with OV/P100 cartridges - Implement proper decontamination procedures per section 10.2
Ergonomics	Lifting and bending	- Buddy system/Proper lifting techniques - No individual lifting over 40 lbs.
Heat/Cold Stress	Excessive heat/cold Lack of air flow	- Cool/Warm break areas - Follow ER SOP HS-17 - Follow H&S Procedures (ACGIH Guidelines) - Plenty of Fluids & breaks
Noise	Vacuum Hose Suction	- Hearing protection required at all times when vacuuming in attic spaces
Falls from elevation	Scaffold/ladders	- Competent person shall inspect scaffolding setup - Erected scaffolds and platforms should be inspected continuously by those using them - Exercise caution when entering or leaving a work platform - Do not overload scaffolds. Follow manufacturer's safe working load recommendations - Do not jump onto planks or platforms - Do not use ladders or makeshift devices to increase the working height of a scaffold. Do not plank guardrails to increase the height of a scaffold - Climb in access areas only, and use both hands - Where required, use proper personal fall arrest equipment, and use it properly - Inspect ladders daily prior to each use - Tag out or destroy damage ladders - Set up ladders on even surface at proper angle (4:1) - Keep your body centered between the rails of the ladder - Never carry tools or materials in your hand when going up or down a ladder - Only one person should be on a ladder at a time - Secure ladder at top and bottom when feasible
Fire	Electrical devices/service	- Fire extinguishers with at least a 3A:40B:C rating shall be placed in

Task Specific Safety Assessment		
Job Task: Interior Cleaning/Removal Operations		
Personal Protective Equipment: Modified Level D w/air monitoring justification		
Hazard	**Sources**	**Control Measures**
		attic when working
Cuts/Punctures	Sharp Objects – Sheet Metal/ Nails/screws	- Beware of sharp objects - Wear leather gloves - Use safety utility knife - Always cut away from body
Slip/Trip/Fall	Attic Structure/roof trusses Uneven terrain/debris	- Install proper flooring/use work boards in attics - Keep area organized - Identify/mark hazards - Remove debris from walking/ working surfaces
Wildlife	Insect/Ticks/spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten

4.3 Physical Hazards

Physical/Environmental Hazard Analysis		
Hazard	Pre Planning to Control Hazard	Active Control Measures
Electrical	1. Locate and mark existing energized lines. 2. De-energize lines if necessary to perform work safely. 3. All electrical circuits will be grounded. 4. All 120 volt single phase which are not a part of the permanent wiring will have a ground-fault interrupter in place. 5. Temporary wiring will be guarded, buried or isolated by elevation to prevent accidental contact by personnel or equipment. 6. Evaluate potential for high moisture/standing water areas and define special electrical wiring needs-typically requirement for low voltage lighting systems.	1. Utilize Qualified Electrical Contractor for any new or temporary electrical construction. 2. Ensure electrical equipment/material meet all local, state and federal code and specifications 3. Use GFCI for all power tool usage.
Ergonomic	1. All operations evaluated for ergonomic impact. 2. Procedures written to define limits of lifting, pulling, etc. 3. Procedures to define how personnel will utilize proper ergonomic concepts and utilize mechanical material handling equipment. 4. Necessary mechanical material handling equipment specified and ordered for project.	1. Proper body mechanics techniques stressed and enforced on a daily basis. 2. Mechanical handling equipment maintained and utilized. 3. Proper body mechanics stressed in scheduled safety meetings. 4. Injuries reported and medically treated if in doubt about severity. 5. Operations changed as necessary based on injury experience or potential.
Existing Site Topography	1. Survey site prior to layout. Identify areas unsafe for personnel or equipment due to physical conditions. 2. Identify/locate existing utilities. 3. Determine impact of site operations on surrounding properties, communities, etc. 4. Identify mechanized equipment routes both on site and onto and off the site. 5. Layout site into exclusion and contamination reduction zones based on initial site evaluation.	1. Awareness to work environment - regular inspection/audits to identify changing conditions. 2. Shut down operations when unknown conditions encountered.
Fires & Explosions	1. Evaluate all operations for fire and explosion potential. 2. Define specific procedures for unique operations presenting unusual hazard such as flammable tank demolition. 3. Ensure that properly trained personnel and specialized equipment is available. 4. Define requirements for handling and storage of flammable liquids on site, need for hot work permits and procedures to follow in the event of fire or explosion. 5. Define the type and quantity of fire suppression equipment needed on site. 6. Coordinate which local fire fighting agencies to discuss unique fire hazards, hazardous materials, etc. 7. Ensure site operations comply with 29CFR 1910.157G.	1. Inspect fire suppression equipment on a regular basis. 2. Store flammables away from oxidizers and corrosives. 3. Utilize Hot Work Permit for all hot work on-site. 4. Follow any site specific procedures regarding work around flammables. 5. Review and practice contingency plans. 6. Discuss on regular basis at scheduled safety meetings.
Flammable Vapor and Gases	1. Evaluate site to determine sources of likely flammable gas or vapor generation. 2. Develop specific procedures to be followed in the event of exposure to flammables. 3. Specify specialized equipment needs for inerting flammable	1. Calibrated monitoring equipment available and utilized by trained personnel whenever working where flammable gas or vapor is present. 2. Monitoring performed at regular frequency

Physical/Environmental Hazard Analysis		
Hazard	Pre Planning to Control Hazard	Active Control Measures
	atmospheres, ventilating spaces and monitoring flammable vapor concentrations. 4. Define requirements for intrinsically safe equipment. 5. Develop contingency plan to follow in the event of fire or explosion.	and in all areas where vapor could generate or pool. 3. Equipment and operations shut down when threshold levels are exceeded. 4. Contingency plans reviewed regularly by all involved personnel. 5. Work areas are carefully inspected to look for possible ignition sources. Sources are removed. 6. Operations shut down if specific task procedures can't be followed to the letter.
Heavy Equipment Operation	1. Define equipment routes and traffic patterns for site. 2. Insure that operators are properly trained on equipment operation for all equipment required on project. 3. Define safety equipment requirements, including back up alarm and roll over, for all equipment on site. 4. Define equipment routes and traffic patterns for site. 5. Implement SOP of requiring operators to safety inspect equipment on a daily basis in accordance with manufacturer requirements. 6. Evaluate project requirements to ensure that equipment of adequate capacity is specified.	1. Equipment inspected as required. 2. Equipment repaired or taken out of service. 3. Ground spotters are assigned to work with equipment operators. 4. Utilize standard hand signals and communication protocols. 5. Personnel wear the proper PPE; utilize hearing protection, gloves for handling rigging, etc. 6. Equipment safety procedures discussed at daily scheduled safety meetings. 7. Personnel do not exceed lifting capacities, load limits, etc. for equipment in question. 8. Personnel follow basic SOP's which prohibit passengers on equipment, activating brakes and grounding buckets, securing loads prior to movement, etc.
Illumination	1. Evaluate all operations and work areas to determine lighting requirements. 2. Specify specialized lighting requirements including explosion proof, intrinsically safe, lighting needs. 3. Determine if nighttime outdoor operations are necessary. 4. Evaluate tasks to be performed and number of light plants necessary to allow operations. 5. Ascertain if outdoor lighting from nighttime operations will have an impact on surrounding communities.	1. Inspect specialized equipment and discard or replace as needed. 2. Add additional lighting to areas with lighting deficiencies. 3. Inspect drop cords and portable lights on regular basis. Replace or repair as necessary.
Noise	1. Local community noise standards examined. 2. Expected loud operations evaluated to determine compliance with community standards. 3. Loud operations scheduled for approved time periods. 4. Noise level standards established for equipment brought onto site. 5. Hearing protection requirements defined for personnel expected to have excessive exposures.	1. Personnel receive annual audiogram. 2. Personnel required to wear hearing protection. 3. Routine noise level monitoring and dosimetry performed. 4. Defective equipment repaired as needed. 5. Ongoing hearing conservation education promoted at scheduled safety meetings. 6. Medical evaluation following noise (impact) exposure if symptoms present themselves.
Personal Injuries	1. Site operations will be evaluated for exposures with serious injury potential such as falling objects, pinch points, flying objects, falls from elevated surfaces, etc. 2. A written Fall Prevention Program will be developed if workers will be required to work at heights greater than 6 feet from unguarded work locations. 3. PPE requirements will be based on potential for injury.	1. Personnel will wear required PPE. 2. Specialized equipment such as rope grabs, winches, etc. will be inspected prior to each use. 3. Defective equipment will be immediately replaced. 4. All injury and near miss incidents will be reported to the SHSO. 5. First aid/CPR trained person on site at all times. 6. First aid on site. 7. Transport for medical care if necessary.
Small Equipment Usage	1. Site operations will be evaluated to determine need for specialized intrinsically safe, explosion-proof and UL approved equipment and instruments. 2. Implement requirement for G.F.I., double insulated tool usage, or assured grounding program in all outdoor operations, will be utilized. 3. Specify equipment needs to ensure that equipment used only for the purpose for which it is designed and to prevent abuse or misuse of the equipment.	1. Inspect each tool prior to each use. 2. Ensure all guards are in use and properly positioned. 3. Ensure item being worked on is properly braced if necessary. 4. Get help when appropriate to hold or brace item being worked on. 5. Wear leather or other appropriate gloves in

Physical/Environmental Hazard Analysis		
Hazard	Pre Planning to Control Hazard	Active Control Measures
	4. Specify requirements for the inspections and maintenance of specialized equipment. 5. Specify that all equipment utilized on the project meets all OSHA requirements.	addition to level C PPE.
Weather Conditions	1. Evaluate prevailing weather conditions for the site. 2. Contingency plans developed for likely severe weather conditions such as tornado, and extreme thunderstorm. 3. Provide for daily weather forecast service in extreme weather areas. 4. Plan to weatherize safety systems, such as showers and eye washes that would be impacted by extreme cold weather. 5. Order necessary specialized cold weather clothing. 6. Grounding and bonding requirements defined for thunderstorm areas. 7. Sheltered air conditioned break areas provided for extreme hot and cold weather zones.	1. Employees trained in contingency plan for severe weather conditions. 2. Emergency water sources inspected regularly in cold areas. 3. Weather service contacted regularly during storm conditions. 4. Supervisory personnel cease operations during extreme storm conditions (i.e., thunderstorms). 5. Personnel evacuate to safe assembly area.
Heat Stress	1. Anticipate possible high temperatures (summer months). 2. Be aware of heat stress symptoms, quit sweating, pale, clammy skin, dizziness	1. Cool break area. 2. Drink water. 3. Buddy system/ awareness 4. First aid on site. 5. Medical care if symptoms persist.
Cold Stress	1. Anticipate possible low temperatures (winter months). 2. Remember the temperature does not have to be below freezing to have a cold stress situation.	1. Warm break area. 2. Warm decaffeinated drinks. 3. Buddy system/ awareness. 4. First aid on site. 5. Medical care if symptoms persist

5.0 TRAINING REQUIREMENTS

This section describes ER's project training requirements and site visitor policy. Training of all personnel shall be in accordance with OSHA 29 CFR 1910.120 and the National Fire Protection Association (NFPA) standards.

5.1 Project Training Requirements

The training listed in Table 5-1 will be provided to project participants as noted. All required training will be documented and this documentation maintained onsite.

Project Training Requirements:		
Topic	**Description**	**Personnel**
General Training		
Site Safety and Health Plan	Site-specific hazards and control requirements, before commencement of field work. Includes training in proper use and care of PPE.	All project personnel
Activity Hazard Analysis	Activity-specific hazards, controls and training requirements for a specific phase or activity, prior to commencement of activity	Workers, supervisors and oversight personnel engaged in the activity
Daily Safety Briefing	In addition to plan-of-the-day and daily hazard reminders, often used to cover a specific topic; provided refresher training on various issues; or changes in hazards, controls or procedures.	All field workers, supervisors and field oversight personnel
Emergency Action Plan	Roles, responsibilities, recognition of emergency conditions, reporting and notification, evacuation and other procedures.	All project personnel, with detailed information on procedures for workers with special responsibilities
OSHA 40-Hour Hazardous Waste Operation (HAZWOPER) Training	General hazards and controls for hazardous waste activities at remediation sites, prior to performing work in an exclusion zone.	General site workers, supervisors, oversight personnel on HAZWOPER sites
OSHA 8-Hour Supervisor	Managing HAZWOPER work activities	Supervisors and management support staff on HAZWOPER sites
OSHA 8-Hour Refresher	Current annual refresher for HAZWOPER sites.	Workers, supervisors and oversight personnel engaged in the activity
OSHA 10-Hour Construction Safety	10-Hour OSHA Construction Safety Course	SHSS at a minimum.
Hazard Communication	Requirements for MSDS, labels; hazards of site materials and controls; location of and access to inventories and MSDS.	All project personnel potentially exposed to hazardous materials
Fire Extinguisher	General education on selection, distribution, and proper use of fire extinguishers.	All project personnel

Project Training Requirements:		
Topic	**Description**	**Personnel**
Special Training		
First aid/ Cardiopulmonary Resuscitation (CPR)	Red Cross, National Safety Council or other authorized course, with current refresher	At least 2 project personnel
Fall Protection	Fall (from elevation) hazards, fall protection techniques, especially proper use of personal fall arrest systems and rescue procedures.	Task-specific, workers exposed to fall hazards.
Lockout/tagout	Site-specific energy control and verification procedures.	Authorized personnel working on de-energized systems, and affected employees whose work may be impacted by a lockout/tagout situation.
Other Heavy Equipment operations	Qualified by Construction Manager, Superintendent or Equipment Supervisor as documented on ECC Equipment Operator Qualifications Form	Equipment Operators
Power tools (e.g. chain saws, chippers, powder-actuated tools, compressed air systems)	Hazards and proper use and maintenance as described in operations manual. Powder-operated tool users certified by manufacturer.	Tool users

5.2 Visitor Indoctrination Policy

All site visitors will be required to review the daily tailgate safety issues and sign the visitor log. At a minimum, all visitors must be informed of the anticipated hazards and PPE requirements, designated work zones, escort procedures, and emergency procedures.

6.0 PERSONAL PROTECTIVE EQUIPMENT

The following is a brief description of the personal protective equipment, which may be required during various phases of the project. The U.S. EPA terminology for protective equipment will be used; Levels A, B, C and D.

Respiratory protective equipment shall be NIOSH-approved and use shall conform to OSHA 29 CFR Part 1910.134 Requirements. Each employer shall maintain a written respirator program detailing selection, use, cleaning, maintenance and storage of respiratory protective equipment. The written Respirator Program will be maintained at the local and regional offices.

6.1 Level A Protection Shall Be Used When: (NOT ANTICIPATED)

- The extremely hazardous substance requires the highest level of protection for skin, eyes and the respiratory system;
- Substances with a high degree of hazard to the skin are known or suspected;
- Chemical concentrations are known to be above IDLH levels; or,
- Biological hazards requiring Level A are known or suspected.

6.2 Level B Protection Shall Be Used When: (NOT ANTICIPATED)

- The substance(s) has been identified and requires a high level of respiratory protection but less skin protection;
- Concentrations of chemicals in the air are IDLH or above the maximum use limit of an APR with full-face mask;
- Oxygen deficient or potentially oxygen deficient atmospheres (<19.5%) are possible; and/or, Confined space entry may require Level B.
- Incomplete identification of gases and vapors, but not suspected to be harmful to skin or skin absorbable

6.3 Level C Protection Shall Be Used When:

- The same level of skin protection as Level B, but a lower level of respiratory protection is required;
- The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove contaminants; or,

- The substance has adequate warning properties and all criteria for the use of APR respirators has been met

Level C Protective Equipment at a Minimum Shall Consist of:

Air Purifying Respirator	Fullface
Cartridges (type)	Particulate
Chemical Resistant/Protective Coveralls (type)	Particulate resistant (i.e. Pro Shield or equivalent)
Gloves	Cotton Work Gloves
Safety shoes/Boots (type)	Steel Toed
Hard Hat	NIOSH approved
Respiratory Inserts	As required
Other (List ____)_____	N/A
Modifications:	Use leather gloves when handling sharp objects.

6.4 Modified Level D Protection Shall Be Used When:

- The atmosphere is demonstrated to be within OSHA permissible limits
- Work functions preclude splashes, immersion or the potential for unexpected inhalation of, or contact with, hazardous concentrations of harmful chemicals.

Modified Level D Protection Equipment at a Minimum Shall Consist of:

Chemical Resistant/Protective Coveralls	Particulate resistant (i.e. Pro Shield or equivalent)
Safety Shoes/Boots	Steel toed/shank work boots
Boot Covers (booties)	Latex
Work Gloves	Cotton or Leather
Hard Hat	NIOSH approved
Face Shield	As necessary
Safety Glasses	NIOSH approved
Modifications:	

6.5 Level D Protection Shall Be Used When:

- The atmosphere is demonstrated to be below OSHA permissible exposure limits
- Work functions preclude splashes, immersion or the potential for unexpected inhalation of, or contact with, hazardous concentrations of harmful chemicals.

Level D Protection Equipment at a Minimum Shall Consist of:

Cotton or cotton blend coverall	Full body washable
Rain Suit	As required
Safety Shoes/Boots (type)	Steel Toed
Boot Covers (booties)	During muddy conditions as necessary
Work Gloves	Cotton work gloves
Hard Hat	NIOSH approved
Safety Glasses	NIOSH approved
Modifications:	Use leather gloves when handling sharp objects.

6.6 Decisions to Upgrade/Downgrade PPE

All decisions to downgrade from Level B to C or D must be accompanied by air monitoring results. The Regional Safety Managers must be advised of on-site decisions to downgrade. All decisions must be documented with an Addendum to the Plan.

The following conditions will necessitate reevaluation of PPE use.

- commencement of a new work not previously identified
- change of job tasks during a work phase
- change of season/weather
- contaminants other than those identified in Safety Plan
- change in ambient levels of contaminants
- change in work which affects degree of chemical contact

6.7 Project Personal Equipment Requirements

Project Personal Protective Equipment Requirements:							
Activity	**Respiratory Protection**	**Body Protection**	**Head Protection**	**Hand Protection**	**Eye/Face Protection**	**Foot Protection**	**Hearing Protection**
Site Mobilization (Level D)	None	None	ANSI-approved Hard Hat	Leather work gloves	ANSI-approved safety glasses	ANSI-approved safety boots	Plugs or muffs when using power tools
Interior Cleaning and Removal Operations (Modified Level D)	Full Face Air-Purifying Respirator w/ OV/P100 cartridges	Tyvek disposable coverall or equivalent	ANSI-approved Hard Hat	Nitrile inner/outer gloves	ANSI-approved safety glasses	ANSI-approved safety boots with boot covers	Plugs or muffs when using power tools
Restoration (Level D)	None	None	ANSI-approved Hard Hat	Leather work gloves	ANSI-approved safety glasses	ANSI-approved safety boots	Plugs or muffs when using power tools

Personal Protective Equipment Inspection and Care

Inspection and care of PPE are covered in the ER Corporate SOP HS-24.

6.8 Respiratory Protection Program

ER shall implement HS-24 Respiratory Protection Program for its employees and subcontractors and train them on its contents. The program will be administered by the SHSO.

Respiratory protective equipment shall be NIOSH-approved and use shall conform to OSHA 29 CFR Part 1910.134 Requirements. ER and subcontractors shall maintain a written respirator program detailing selection, use, cleaning, maintenance and storage of respiratory protective equipment.

7.0 MEDICAL MONITORING REQUIREMENTS

7.1 Pre-Employment Medical Examination

a) Pre-employment medical examinations are required for persons working at hazardous waste sites.
b) All examinations must be completed and documented prior to assignment to this site.
c) All examinations will be conducted following parameters established by WorkCare™.

7.2 Site Specific Medical Examination

a) Site specific medical examination is not anticipated for this project

7.3 Annual Medical Examination

The medical examination must have been within a 12-month period prior to on-site activity and repeated annually.

7.4 Suspected Exposure Medical Examination

a) Following any suspected uncontrolled exposure to site contaminants, personnel should be scheduled for a special medical examination.
b) The medical examination will be specific for the contaminants and the associated target organs or physiological system.
c) Questions regarding the type of medical examination can be directed to ER's Corporate Health and Safety Manager.

7.5 Contractor Physical Examination Requirements

All subcontractors entering the contamination reduction or exclusion zone will have adequate medical surveillance satisfying 29 CFR 1910.120.10 (f).

8.0 Health and Hazard Monitoring

According to 29 CFR 1910.120 (h) Air Monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection needed on-site.
ER will maintain an air monitoring program to evaluate concentrations of specific chemical groups or contaminants in ambient air during work activities. This program will include both real-time, direct monitoring equipment, and chemical-specific personal air monitoring as appropriate.

Both area and personal monitoring will be conducted to document potential exposures to hazardous constituents, as well as to evaluate the adequacy of the Personal Protection Equipment (PPE) program.

8.1 Routine Air Monitoring Requirements

- Upon initial entry to rule out IDLH conditions
- When the possibility of an IDLH condition or flammable atmosphere has developed
- When work begins on a different portion of the site
- Contaminants other than those previously identified are being handled
- A different type of operation is initiated
- Employees are handling leaking drums or containers or working in areas with obvious liquid contamination
- During confined space work

Air monitoring will consist at a minimum of the criteria listed below. All air monitoring data will be documented and available in the command post site files for review by all interested persons. Air monitoring instruments will be calibrated and maintained in accordance with the manufacturer's specifications. Calibration and maintenance performed will be entered in the site log and/or instrument log book.

8.2 Site Specific Air Monitoring Requirements

Health Hazard Monitoring:					
Real Time (Air, noise, heat, radiation, light)					
Activity	**Target Analyte**	**Instrument**	**Frequency**	**Action Levels**	**Actions/Upgrade and Rationale**
Interior Removal/Cleaning Operations (Level C/Mod Level D)	PCB particulate	pDR 1000 or equivalent	Initial and periodic	TBD based on dust/dirt concentration	Evacuate area Evaluate operations Upgrade respiratory protection
Site wide	Temperature Extremes/heat stress	N/A	Frequent breaks and fluids shall be provided	Variable depending on the individual and work activity	Participate in heat stress monitoring program, take breaks in the shade, drink fluids as allowed

8.3 Integrated Personnel Exposure Monitoring

Sampling for PCB exposure shall be conducted by ER utilizing equipment and media appropriate to NIOSH Method 5503. Analysis will be done by AIHA accredited laboratory. Copies of all sampling data, including instrument calibration and maintenance, personal data sheets, COCs, and analytical results shall be maintained by ER.

9.0 SITE CONTROL AND STANDARD OPERATING PROCEDURES

9.1 Work Zones

The primary purpose for site controls is to establish the hazardous area perimeter, to reduce migration of contaminants into clean areas and to prevent access or exposure to hazardous materials by unauthorized persons. At the end of each workday, the site should be secured or guarded, to prevent unauthorized entry. Site work zones will include:

Clean Zone/Support Zone

This uncontaminated support zone or clean zone will be the area outside the exclusion and decontamination zones and within the geographic perimeters of the site. This area is used for staging of materials, parking of vehicles, office and laboratory facilities, sanitation facilities, and receipt of deliveries. Personnel entering this zone may include delivery personnel, visitors, security guards, etc., who will not necessarily be permitted in the exclusion zone. All personnel arriving in the support zone will upon arrival, report to the command post and sign the site entry/exit log. There will be one controlled entry/exit point from the clean zone to the decontamination zone.

Decontamination Zone

The decontamination zone will provide a location for removal of contaminated personal protective equipment and final decontamination of personnel and equipment. All personnel and equipment should exit via the decon area. A separate decontamination area will be established for heavy equipment.

1. The decontamination zone is a buffer zone between contaminated and clean areas.
2. Identified by yellow banner guard.
3. Decon line is located To Be Determined

Exclusion Zone/Hot Zone

The exclusion zone will be the "hot zone" or contaminated area inside the site perimeter. Entry to and exit from this zone will be made through a designated point and all personnel will be required to sign the hot zone entry/exit log located at the decon area. Appropriate warning signs to identify the exclusion zone should be posted (i.e. "DANGER - AUTHORIZED PERSONNEL ONLY", "PROTECTIVE EQUIPMENT REQUIRED BEYOND THIS POINT", etc.) Exit from the exclusion zone must be accompanied by personnel and equipment decontamination as described in Section 10.0.

1. Will be identified by red banner guard.
2. These areas will be defined by Red banner guard
3. General Safety Rules for Exclusion Zone
    a. wear the appropriate level of PPE defined in plan
    b. do not remove any PPE or break the integrity to pick, scratch, or touch parts of your body
    c. no smoking, eating or drinking
    d. no horseplay
    e. no matches or lighters in this zone
    f. implement the communication and line of sight system

9.2 General Field Safety Rules

- Horseplay is not permitted at any time.
- All visitors must be sent to the command post.
- It is ER policy to practice administrative hazard control for all site areas by restricting entrance to exclusion zones to essential personnel and by using operational SOPs.
- Whenever possible, avoid contact with contaminated (or potentially contaminated) surfaces. Walk around (not through) puddles and discolored surfaces. Do not kneel on the ground or set equipment on the ground. Stay away from any waste drums unless necessary. Protect equipment from contamination by bagging.
- Eating, drinking, or smoking is permitted only in designated areas in the support zone.
- Hands and face must be thoroughly washed upon leaving the decon area.
- Beards or other facial hair that interferes with respirator fit will preclude wearing a respirator.
- All equipment must be decontaminated or discarded upon exit from the exclusion zone.
- All personnel exiting the exclusion zone must go through the decontamination procedures described in Section 10.0.
- Safety Equipment described in Section 6.0 will be required for all field personnel.
- Personnel will only travel in vehicles where individual seats for each occupant are provided.
- Seat belts will be worn as required.
- Fire extinguishers will be available on site and in all areas with increased fire danger such as the refueling area.
- A minimum of two personnel will always be on site whenever heavy equipment is operated.
- Only necessary personnel need to be on or around heavy equipment.
- Employees will not interfere with or tamper in any way with air monitoring equipment.
- Backhoes or other equipment with booms shall not be operated within 10 feet of any electrical conductor.

Minimum Clearance from Energized Overhead Electric Lines

NOMINAL SYSTEM VOLTAGE	MINIMUM REQUIRED CLEARANCE
0-50 kV	10 feet
51-100 kV	12 feet
101-200 kV	15 feet
201-300 kV	20 feet
301-500 kV	25 feet
501-750 kV	35 feet
751-1000 kV	45 feet

- Visitor log will be maintained at the command post or with the security guard. All personnel coming on site will sign in and out on a daily basis.
- Security will be maintained at the site by closing all gates during normal work hours. Site will be locked up in the evening.
- If unauthorized members of the public are found on site, contact RPM immediately and do not leave the individual unattended.
- Visitors are not allowed in the work areas without authorization. Visitors must sign in at the Command Post and receive authorization to enter the site.
- Buddy System
  - The buddy system is mandatory at anytime that personnel are working in the exclusion zone, remote areas, on tanks, or when conditions present a risk to personnel.

- A buddy system requires at least two trained/experienced people who work as a team and maintain at a minimum audible and/or visual contact while operating in the exclusion zone.

- Communication Procedures
  - Radios will be used for onsite communications and Channel(Repeater) will be the designated channel.
  - The crews should remain in constant radio or visual contact while on site.
  - The site evacuation signal will be 3 blasts on the air or vehicle horn.

10.0 DECONTAMINATION PROCEDURES

In general, everything that enters the exclusion zone at this site must either be decontaminated or properly discarded upon exit from the exclusion zone. All personnel, including any state and local officials must enter and exit the hot zone through the decon area. Prior to demobilization, contaminated equipment will be decontaminated and inspected before it is moved into the clean zone. Any material that is generated by decontamination procedures will be stored in a designated area in the exclusion zone until disposal arrangements are made.

NOTE: The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for this site is water. Decontamination solution will be changed daily (at a minimum) and collected and stored on-site until disposal arrangements are finalized.

10.1 Procedures for Equipment Decontamination

Following decontamination and prior to exit from the hot zone, the Project Superintendent shall be responsible for insuring that the item has been sufficiently decontaminated. This inspection shall be included in the site log.

Equipment decontamination will consist of the following steps: Clean with water.

10.2 Procedure for Personnel Decontamination

This decontamination procedure applies to personnel at this site wearing Level C protection. These are the minimum acceptable requirements:

Station 1: Equipment Drop: Deposit equipment used on-site (tools, sampling devices and monitoring instruments, radios, etc.) on plastic drop cloths. These items must be decontaminated or discarded as waste prior to removal from the exclusion zone.

Station 2: Outer Boot and Outer Glove Wash and Rinse: Scrub outer boots, and outer gloves with water. Rinse off using second water supply.

Station 3: Outer Boot and Glove Removal: Remove outer boots covers (if applicable) and gloves (if applicable). If outer boots are disposable, deposit in container with plastic liner. If non-disposable, store in a clean dry place.

Station 4: Outer Garment Removal: If applicable, remove particulate barrier outer garments and deposit in container lined with plastic.

Station 5: Respiratory Protection Removal: Remove hard-hat, and face-piece (if applicable) and deposit on a clean surface. APR cartridges will be discarded as appropriate. Wash and rinse respirator at least daily. Wipe off and store respiratory gear in a clean, dry location.

Station 6: Inner Glove Removal: Remove inner gloves (if applicable). Deposit in container for disposal.

Station 7: Field Wash: Thoroughly wash hands and face with wet wipes and/or soap and water. Shower as soon as possible.

Eating, drinking, chewing gum/tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and/or ingestion of materials is prohibited in any areas where the possibility of contamination exists and is

permitted only in the designated break area. Personnel will not wear or bring dirty/decontaminated clothing into the break areas.

10.3 Disposition of Decontamination Wastes

1. All equipment and solvents used for decontamination shall be decontaminated or disposed of with the established waste streams.
2. Commercial laundries or cleaning establishments that decontaminate or are used to launder contaminated clothing shall be informed of the presence and potentially harmful effects of the contaminants.

11.0 HAZARD COMMUNICATION PROGRAM

Each contractor will be responsible for maintaining a copy of their Hazardous Communication Program and MSDSs on site. The following items are specific to this job site:

11.1 Material Safety Data Sheets

1. Material Safety Data Sheets will be maintained at the Command Post in the Health and Safety Binder or be readily available via the internet.
2. MSDS' will be available to all employees for review during the work shift.
3. See Attachment C and/or the ER Health and Safety Binder. Will also be available on internet.

11.2 Container Labeling

1. All containers received on site will be inspected by the contractor using the material to ensure the following:
   a. all containers clearly labeled
   b. appropriate hazard warning
   c. name and address of the manufacturer

11.3 The following chemicals were brought to the site: (add as required)

1. Gasoline
2. Diesel Fuel

11.4 Employee Training and Information

1. Prior to starting work, each employee will attend a health and safety orientation and will receive information and training on the following:
   a. an overview of the requirements contained in the Hazardous Communication Standard
   b. Hazardous chemicals present at the site
   c. the location and availability of the written Haz Com Program
   d. physical and health effects of the hazardous chemicals
   e. methods of preventing or eliminating exposure
   f. emergency procedures to follow if exposed
   g. how to read labels and review MSDS' to obtain information
   h. location of MSDS file and location of hazardous chemical list

12.0 EMERGENCIES/INCIDENTS/INJURIES

It is essential that site personnel be prepared in the event of an emergency. Emergencies can take many forms; illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather. The following sections outline the general procedures for emergencies. Emergency information should be posted as appropriate.

12.1 Emergency Contacts for the Cornell-Dubilier Electronics Site

SERVICE	CITY / LOCATION	EMERGENCY PHONE
Fire	South Plainfield, NJ	911 or (908) 756-4761
Police	South Plainfield, NJ	911 or (908) 755-0700
Sheriff	Middlesex County	911 or (908) 755-0700
Ambulance	South Plainfield, NJ	911 or (980) 754-2343
Hospital	JFK Medical Center 65 James Street Edison New Jersey 08820	911 or (732) 321-7000
Occupational Medicine Clinic	Concentra Medical Center 116 Corporate Blvd # E South Plainfield, NJ 07080	(908) 757-1424
Poison Control Center		(800) 222-1222

NOTE: Maps and directions to the hospital will be posted in the site office trailer/pickup truck.

The following individuals have been trained in CPR and First Aid: Mark Bicksler, TBD

12.2 Additional Emergency Numbers

National Response Center	800-424-8802
Center for Disease Control	404-488-4100 (24 hr)
AT&F (Explosives Information)	800-424-9555
Chemtrec	800-424-9300

Environmental Restoration Contacts

Environmental Restoration	888-814-7477 (24 Hr.)
Environmental Restoration (St. Louis)	636-227-7477

12.3 Emergency Equipment Available On-Site

COMMUNICATIONS EQUIPMENT	LOCATION
Public Telephones	TBD
Private Telephones	Office Trailer
Mobile Telephones	On site
Two-Way Radios	N/A
Emergency Alarms/Horns	N/A
Other:	

MEDICAL EQUIPMENT	LOCATION
First Aid Kits	Office trailer
Stretcher/Backboard	
Eye Wash Station: *(within 100 feet of hazard zone)*	Decon area
Safety Shower	

FIRE FIGHTING EQUIPMENT	LOCATION
Fire Extinguishers	Office Trailer
Other	

SPILL OR LEAK EQUIPMENT	LOCATION

Absorbent Boom/Pads:	
Dry Absorbent:	RM Truck

ADDITIONAL EMERGENCY EQUIPMENT	LOCATION

12.4 Incident Reporting/Investigations

- All incidents, including personal injury and property damage, must be reported to the RM, Supervisor, or SHSO immediately
- The RM will contact ER Corporate Health and Safety by telephone immediately. The RM, SHSO, and effected employees will conduct an immediate investigation of the incident and document all results on the Incident and Investigation Report form
- The Response Manager will assign a supervisory individual to accompany all injured personnel to the clinic and follow guidelines outlined in the ER Return to Work Program
- Copies of all Incident and Investigation Reports will be sent to the ER Corporate Health and Safety Manager

13.0 Emergency Response Contingency Plan

13.1 Project Personnel Responsibilities During Emergencies

As the administrator of the project, the PM has primary responsibility for responding to and correcting emergency situations. The PM will:

- Take appropriate measures to protect personnel including: withdrawal from the exclusion zone, total evacuation and securing of the site or up-grading or down- grading the level of protective clothing and respiratory protection.
- Take appropriate measures to protect the public and the environment including isolating and securing the site, preventing run-off to surface waters and ending or controlling the emergency to the extent possible.
- Ensure that appropriate Federal, State and local agencies are informed, and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. In the event of an air release of toxic materials, the local authorities should be informed in order to assess the need for evacuation. In the event of a spill, sanitary districts and drinking water systems may need to be alerted.
- Ensure that appropriate decon treatment or testing for exposed or injured personnel is obtained.
- Determine the cause of the incident and make recommendations to prevent the recurrence.
- Ensure that all required reports have been prepared.

13.2 Medical Emergencies:

Any person who becomes ill or injured in the exclusion zone must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket.) First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to Corporate Health and Safety.

Onsite First Aid Support - Onsite medical support during project execution will be available from two or more individuals who are trained in First Aid and Cardiopulmonary Resuscitation (CPR) and blood borne pathogens.

First aid kits shall be Type III, 16 unit kits, including one pocket mouthpiece or CPR barrier. Kits shall be checked prior to use, and at least weekly when work is in progress to ensure that contents are replaced as used.

Medical Transport of Employees and Case Management - For non-emergency injuries, a local clinic will be identified with the assistance of the Corporate Medical Consultant, Dr. Peter Greaney or the WorkCare

Occupational Health Nurse, Marsha Locke. These individuals will be contacted prior to transporting the injured worker to the clinic. The WorkCare provider will attempt to contact the clinic ahead of the arrival of the patient to establish oversight of case management. Under no circumstances will an injured employee drive unescorted to a hospital, clinic, etc. An employee with minor injury may be transported by car after first aid treatment is given. The SHSO or other project management personnel will transport the injured person to the facility. The employee who transports the injured person shall be trained in first aid and CPR whenever possible. When the injury is severe, or when in doubt concerning the severity of injury, the employee will be transported by ambulance.

Injured employees that require medical treatment or are taken to a doctor, hospital, clinic, etc., will not be allowed to resume work without a written return to work statement from the treating physician. This statement shall supply a medical diagnosis of the problem, the date of return to work, and work limitations. Should a return to work statement such as "light duty" be given, the treating physician will be contacted to determine the specific limitation. ER will make an assessment of work the employee normally performs whether or not the limitation interferes with the employee's normal work.

Whenever there are questions on the appropriateness of the diagnosis or prescribed course of treatment, WorkCare will be contacted to arrange for a second opinion. Copies of all Incident and Investigation Reports will be sent to the ER Corporate Health and Safety Manager

13.3 Fire or Explosion:

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival the PS or designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on- site.

If it is safe to do so, site personnel may:

- Use firefighting equipment available on site.
- Remove or isolate flammable or other hazardous materials which may contribute to the fire.

13.4 Spills, Leaks or Releases:

In the event of a spill or a leak, site personnel will:

- Locate the source of the spillage and stop the flow if it can be done safely.
- Begin containment and recovery of the spilled materials.

13.5 Evacuation Routes and Resources:

Evacuation routes and rally points will be determined have been established by work area locations for this site. All work areas have been provided with two designated exit points. Evacuation should be conducted immediately, without regard for equipment under conditions of extreme emergency. See site map for evacuation routes.

Evacuation notification will be three blasts on an air horn, vehicle horn, or by verbal communication via radio.

- Keep upwind of smoke, vapors or spill location.
- Exit through the decontamination corridor if possible.
- If evacuation is not via the decontamination corridor, site personnel should remove contaminated clothing once they are in a location of safety and leave it near the exclusion zone or in a safe place.
- The PS will conduct a head count to insure all personnel have been evacuated safely.
- In the event that emergency site evacuation is necessary, all personnel are to:
  1. Escape the emergency situation;
  2. Decontaminate to the maximum extent practical; and,
  3. Meet at the designated rally point.
- In the event that the command post is no longer in a safe zone, meet: TBD.

ATTACHMENT A

SITE SAFETY PLAN AMENDMENTS

SITE SAFETY PLAN AMENDMENT #	
SITE NAME:	
DATE:	
TYPE OF AMENDMENT:	
REASON FOR AMENDMENT:	
ALTERNATE SAFEGUARD PROCEDURES:	
REQUIRED CHANGES IN PPE:	

_____ _____
EPA On-Scene Coordinator (Date)

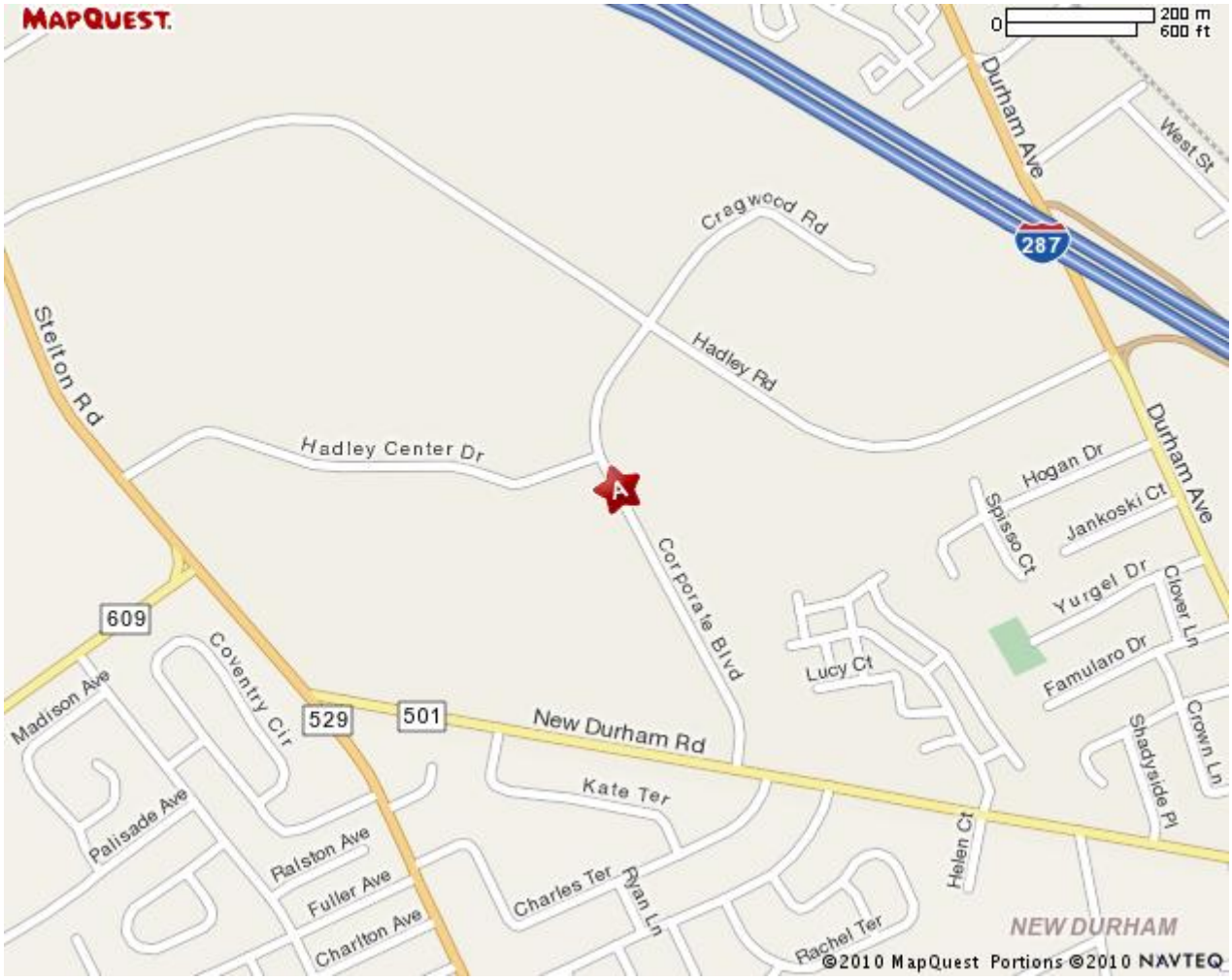
_____ _____
ER Response Manager (Date)

_____ _____
ER Health and Safety Manager (Date)

ATTACHMENT B

SITE MAPS

CONCENTRA MEDICAL CENTER LOCATION



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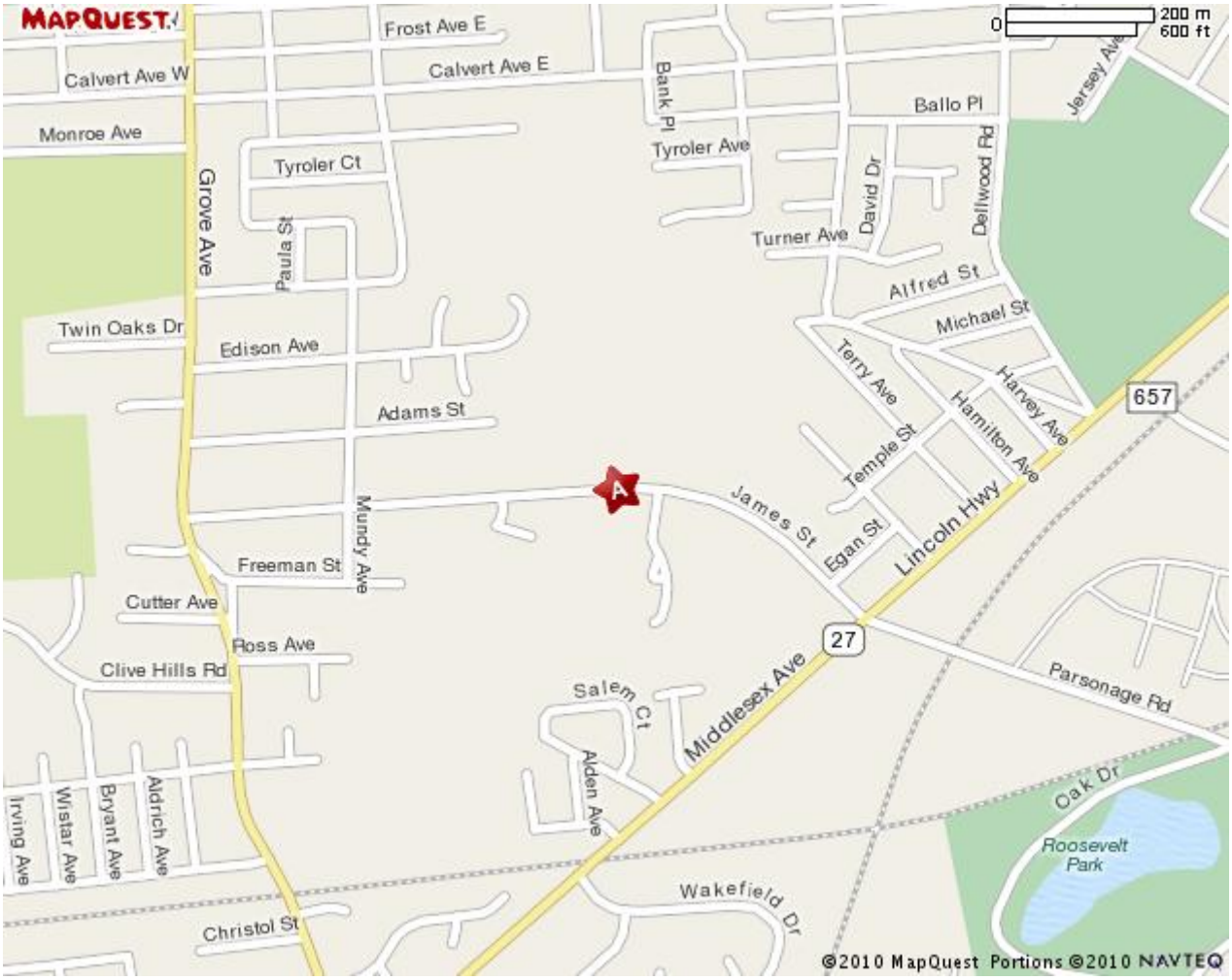
CONCENTRA MEDICAL CENTER
CORPORATE BLVD # E
SOUTH PLAINFIELD, NJ 07080

(908) 757-1424

JFK MEDICAL CENTER LOCATION



JFK MEDICAL CENTER
65 JAMES ST
EDISON, NJ, 08820
(732) 321-7000

ATTACHMENT C

CHEMICAL HAZARD INFORMATION

ATTACHMENT Z

SITE-SPECIFIC TRAINING RECORD

SITE-SPECIFIC TRAINING RECORD

This is to advise that _____ conducted a Site-Specific Training Course
(Instructor's name)

for _____ at the
(Company Name)

_____ project on _____.
(TO #, Project Name) *(Date)*

The total duration of the instructions was _____ hours.

Instruction covered the topics checked off below:

- Site Location, Description and History ☐
- Potential site hazards (chemical, physical, and biological) ☐
- Chemical, physical, and toxicological properties of site contaminants ☐
- Safe work practices ☐
- Training requirements ☐
- Medical Surveillance ☐
- Control Zones ☐
- Monitoring ☐
- Selection, use, and limitation, of personal protective equipment ☐
- Personnel and equipment decontamination ☐
- Emergency response procedures ☐
- Hazard communication ☐
- Blood borne pathogen briefing ☐

The following participant attended the training course for the full duration indicated above.

_____ _____
Name (Print) *Signature*